



ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector

Vol. 5 No. 12

December 2002

● Update On The 2002 NEC And Electrical Rules (WAC) Adoption Process

The draft rules were presented to the Electrical Board at their October 31st meeting and at a special meeting on December 5th. The board unanimously recommended that the proposed WAC rule move forward in the implementation process with the following qualifications:

- Recommended that the HVAC/R scope of work remain unchanged until further stakeholder meetings to address the HVAC/R scope of work can be held. The department will soon be facilitating meetings to gain agreement on the language for the HVAC/R scope of work. The board directed that the meeting attendees reach agreement by January 17th, 2003;
- Recommended that proposed section WAC 296-46B-925(16), power utility exemption for telecommunications transition boxes, be deleted. The board felt that this type of exemption should be dealt with at the legislative level;
- Strongly recommended that the changes to WAC 296-46B-030 be sent forward. This section provides direction for the department to use international standards when approving “industrial use equipment and control panels;” and
- Strongly recommended that the department develop strong language to address examination applicants who are found to be cheating on an examination.

The target effective date for the new rules, is now mid March-April 2003.

There will be no transition period as allowed in the past. Electrical permits purchased after the WAC effective date will be inspected under the 2002 NEC. Electrical examinations given and plan review projects received after the effective date will be under the 2002 NEC. As soon as it is determined, we will post the exact date in our field offices, this newsletter, and on our list server automatic e-mail notification system.

● New Electrical Administrator Renewal Requirements

The passage of Engrossed Senate Bill 6630 changes the renewal requirements for electrical administrators. Electrical administrators who expire **on/after January 1, 2003** will be issued a certificate for 3 years and will be required to have continuing education courses (CEU) in order to renew. The same CEU's can be used for both electrician and electrical administrator renewals. Telecommunications (09) administrator renewals have not changed and will still have the current 2-year certificate with no CEU requirements.

The new fee for electrical administrator renewals (i.e. not telecommunications) will be: \$129.15 if payment is received before the expiration date or \$258.30 if received within 90 days after the expiration date. Administrators who expire in:

- 2003—must provide 8 hours of National Electrical Code (NEC) update.
- 2004—must provide 16 hours of CEU's including at least 8 hours of NEC update.
- 2005—must provide 24 hours including at least 8 hours of NEC update and 4 hours of RCW 19.28/WAC 296-46B.

● NEW NEC Requirements

Motor Disconnect Location—There is a major change in 2002 NEC 430.102 (B). The article states: “A *disconnecting means shall be located in sight from the motor location and the driven machinery location.*” The exception to this rule in the 1999 edition of the NEC allowed the elimination of the disconnect required in 1999 NEC 430-102(b) when the “*disconnecting means for the controller is individually capable of being locked in the open position.*” A lockable disconnecting means ahead of the controller that met the requirements found in 1999 NEC 430-102(a) was the only criteria for the

permission to eliminate the disconnect at the motor. This exception was broad in scope and has been completely rewritten.

The exception in the 2002 NEC 430.102(B) still allows the disconnect to be out of sight but is much more restrictive than the previous code. The new exception requires: *“The provision for locking or adding a lock to the disconnecting means shall be permanently installed on or at the switch or circuit breaker used as the disconnecting means.”* It can only be applied when one of the following is true:

- **It is impracticable, that is impossible, to install it in compliance with 2002 NEC 430.102(B).** A submersible well pump is an example of when this applies. The adjective impracticable applies to a course of action that is impossible to carry out or put into practice;
- **Installation of the required disconnect would introduce additional or increased hazards to life and property** (e.g. Industrial machinery where orderly shut down is required for safety is an example of when this applies); or
- **In industrial installations, with written safety procedures, where conditions of maintenance and supervision ensure that only qualified persons service the equipment** (e.g. Mills, factories, and manufacturing plants are examples of where this applies). This applies only in industrial installations and requires qualified persons service the equipment. The 2002 NEC defines a *“qualified person”* as *“One who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved.”*

HVAC/R Equipment Outlet – The 1999 NEC only required the outlet for equipment installed in attics, on rooftops, and in crawl spaces and specifically exempted the outlet requirement for rooftop equipment on one-and two-family dwelling units. The requirement for a receptacle outlet for the servicing of HVAC/R equipment has been significantly modified in the 2002 Code. 2002 NEC 210.63 requires a 125-volt, single phase, 15- or 20-amp receptacle to be installed on the same level as and within 25 feet of all HVAC/R equipment regardless of where the equipment is located. This includes attics, on rooftops, and in crawl spaces on one-and two-family dwelling units previously exempted from the outlet requirement for rooftop equipment.

● **Mandatory “Code Update” Continuing Education Courses**

In each electrician certification renewal cycle (three years) you must have 24 hours of continuing education with at least 8 hours in the “code update” category. The proposed WAC rule also requires that at least 4 hours of the electrician’s 24 hours of CEUs be related to RCW 19.28 and the electrical rules. This requirement ensures that every Washington electrician has exposure to the major changes in each new addition of the NEC and the electrical laws. An Electrical Board committee reviews and approves each course application and outline to determine whether the content merits the hours of CEU credit awarded for completing the course.

Improper reporting of CEU’s will result in suspension of the electrician’s certificate and revocation or suspension of the sponsor’s course approval.

● **Electrical Question of the Month**

This Month’s Question: A generator supplying a legally required standby power system must be capable of restoring power within _____ seconds. A) 10, B) 30, C) 60, D) 90.

Last Month’s Question: According to the 2002 NEC, circuit breakers used as switches to control mercury vapor luminaires (lighting fixtures) shall be listed and marked as _____?
A) SWD, B) HID, C) SWD or HID, D) HACR

The answer is: B) Mercury Vapor is a type of high intensity discharge lighting. 2002 NEC 240.83(D) requires that circuit breakers used to switch high intensity discharge luminaires be marked HID. Therefore the correct answer is B) HID.